

Application Serial No.: 09/672,987
Attorney Docket No.: 0190227

List of Claims:

1-4. (Canceled)

5. (Currently Amended) A selectable resolution image capture system comprising:
an imager having a plurality of photocells that produce an analog electrical
response to light exposure;
a circuit that converts the electrical responses of the plurality of photocells into
digital signals;
the circuit having a full-resolution mode and a low-resolution mode; and
an image processor that operates the circuit and selects between the full-resolution
and low-resolution modes of the circuit to capture an image, where the image processor
detects whether there is a low incident light condition, and if so, in response to detecting
the low incident light condition, the image processor switches from the full-resolution
mode to the low-resolution mode of the circuit and captures the image using the low-
resolution mode of the circuit.

6. (Currently Amended) A selectable resolution image capture system comprising:
an imager having a plurality of photocells that produce an analog electrical
response to light exposure;

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a circuit that converts the electrical responses of the plurality of photocells into digital signals;

the circuit having a full-resolution mode and a low-resolution mode; and

an image processor that operates the circuit and selects between the full-resolution and low-resolution modes of the circuit to capture an image, where the image processor detects whether there is a low power condition, and if so, in response to detecting the low power condition, the image processor switches from the full-resolution mode to the low-resolution mode of the circuit and captures the image using the low-resolution mode of the circuit.

7-24. (Canceled)

25. (New) The selectable resolution image capture system of claim 5, wherein the plurality of photocells are arranged in a plurality of columns and rows, and wherein each of the plurality of rows has an alternating pattern of red, green, red, green and green, blue, green, blue pixels, and

wherein the image processor includes a row pulse generator and a column pulse generator that propagate pulse signals to cause at least two of the plurality of pixels of the same color to be selected during each clock cycle, and wherein a frequency of the pulse determines a resolution reduction of the image.

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26. (New) The selectable resolution image capture system of claim 5 comprising:

a row clock signal operating at a first clock rate;

a column clock signal operating at a second clock rate; and

a charge accumulator configured to accumulate charges from the selected pixels

during first clock cycles;

wherein the image processor increases the first clock rate and the second clock rate

during second clock cycles when the charge accumulator is not accumulating charges.

27. (New) The selectable resolution image capture system of claim 6, wherein the

plurality of photocells are arranged in a plurality of columns and rows, and wherein each

of the plurality of rows has an alternating pattern of red, green, red, green and green, blue,

green, blue pixels, and

wherein the image processor includes a row pulse generator and a column pulse generator that propagate pulse signals to cause at least two of the plurality of pixels of the same color to be selected during each clock cycle, and wherein a frequency of the pulse determines a resolution reduction of the image.

28. (New) The selectable resolution image capture system of claim 6 comprising:

a row clock signal operating at a first clock rate;

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a column clock signal operating at a second clock rate; and
a charge accumulator configured to accumulate charges from the selected pixels
during first clock cycles;

wherein the image processor increases the first clock rate and the second clock rate
during second clock cycles when the charge accumulator is not accumulating charges.

29. (New) A method of selecting a resolution of an image by an image capture system, the method comprising:

producing an analog electrical response to light exposure using a plurality of photocells;
converting the electrical responses of the plurality of photocells into digital signals using a circuit having a full-resolution mode and a low-resolution mode;
detecting whether there is a low incident light condition for the image;
switching from a full-resolution mode to a low-resolution mode in response to detecting the low incident light condition; and
capturing the image using the low-resolution mode of the circuit.

30. (New) The method of claim 29, wherein the plurality of photocells are arranged in a plurality of columns and rows, and wherein each of the plurality of rows has an alternating pattern of red, green, red, green and green, blue, green, blue pixels, and

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wherein the image capture system includes a row pulse generator and a column pulse generator that propagate pulse signals to cause at least two of the plurality of pixels of the same color to be selected during each clock cycle, and wherein a frequency of the pulse determines a resolution reduction of the image.

31. (New) The method of claim 29 comprising:
providing a row clock signal operating at a first clock rate;
providing a column clock signal operating at a second clock rate;
accumulating charges from the selected pixels using a charge accumulator during first clock cycles; and
increasing the first clock rate and the second clock rate during second cycles, when the charge accumulator is not accumulating charges.